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Applicant : Wallace T.Y. Tang
Serial No. : 09/134,147
Filed : August 14, 1998
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Attorney's Docket No.: 05542-459003 / 5353C1/CMP

102 REJECTIONS

Claims 11 stands rejected under 35 U.S.C. Section 102(b) as being anticipated by Ogawa. Claim 11 recites a "chemical mechanical polisher for planarizing a film on one side of a substrate having two sides, the polisher comprising: at least one light source that is operable to transmit light toward the substrate from the side of the substrate with the film to illuminate at least one section on the film and reflect light off the illuminated section of the film; and at least one device to receive the reflected light from the film on the substrate while the film is being polished, the at least one device being operable to monitor a dimensional change of the film based on the reflected light from the film on the substrate."

The applicant respectfully traverses the rejection because Ogawa does not disclose elements of claim 11. For example, claim 11 recites a "chemical mechanical polisher for *planarizing a film on one side of a substrate having two sides*, the polisher comprising: at least one light source that is operable to transmit light toward the substrate *from the side of the substrate with the film*." (Emphasis added.) As can be seen, claim 11 requires the least one light source to be operable to transmit light toward the substrate from the side of the substrate with the film to be planarized, which side is referred to as the front side of the substrate. The other side of the substrate is referred to as the backside of the substrate. Thus, claim 11 requires that the at least one light source be operable to transmit light toward the substrate from the front side of the substrate.

The Examiner asserts that Ogawa's light source 27 discloses the applicant's claimed light source. The applicant must respectfully disagree. Ogawa's light source 27 is situated and operates to transmit light from the back side of the substrate. Figure 1 of Ogawa shows a work piece 16 and a polishing cloth 10. The front side of the work piece 16 is the side being polished by the polishing cloth 10. As can be seen, the light source 27 is situated on and operates to transmit light from the side of the work piece 16 that is not being polished. That is, the light source 27 transmits light from the backside of the substrate and not from the front side of the substrate as claim 11 requires. Thus, Ogawa's light source does not disclose the applicant's claimed light source.

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The Examiner does not contend that U.S. Patent No. 6,413,867 B1 to Sarfaty et al. ("Sarfaty") discloses or suggests the applicant's claimed light source. Moreover, the applicant respectfully submits that Sarfaty is not prior art at least because the applicant's filing date of August 18, 1998 predates Sarfaty's filing date of December 22, 1999. For at least the above reasons, claim 11 and claims 12-15, 32, and 33, which depend from claim 11, should be allowed.

Claim 16 stands rejected under 35 U.S.C. Section 102(b) as being anticipated by Ogawa. Claim 16 recites a "chemical mechanical polisher for planarizing a film on one side of a substrate having two sides, the polisher comprising: at least one light source that is configured to transmit light toward the substrate from the side of the substrate with the film to illuminate at least one section on the film and reflect light off the illuminated section; and at least one means for receiving the reflected light from the film on the substrate while the film is subject to thickness changes, the at least one means being operable to monitor thickness changes of the film based on the reflected light from the film on the substrate."

The applicant respectfully traverses the rejection because Ogawa does not disclose elements of claim 16. For example, claim 16 recites a "chemical mechanical polisher for planarizing a film on one side of a substrate having two sides, the polisher comprising: at least one light source that is configured to transmit light toward the substrate from the side of the substrate with the film." For reasons similar to those discussed above, the applicant respectfully submits that Ogawa does not disclose the at least one light source recited by claim 16 and, furthermore, claim 16 and claims 17-19, 34, and 35, which depend from claim 16, should be allowed.

103 REJECTIONS

Claims 14, 17, 19, 32, and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Sarfaty. Claims 14 and 32 depend from claim 11. For reasons similar to those discussed above, claims 14 and 32 should be allowed. Claims 17, 19, and 35 depend from claim 16. For reasons similar to those discussed above, claims 17, 19, and 35 should be allowed.


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Respectfully submitted,

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